

Arc/Info Export (E00) Format Analysis

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This is an updated version of the (world famous) "ANALYSIS OF ARC EXPORT FILE FORMAT FOR ARC/INFO (REV 6.1.1)" that has been around for quite a while. It was impossible to find the author of the original document, but a copy of the original can be downloaded from:

<http://www.geocities.com/~vmushinskiy/fformats/files/e00.txt>

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1. INTRODUCTION

Note: ESRI considers the export/import file format to be proprietary. As a consequence, the identified format can only constitute a "best guess" and must always be considered as tentative and subject to revision, as more is learned.

It appears that all ARC/INFO files except user-created lookup tables are exported, including .ACODE and .PCODE.

2. OVERALL ORGANIZATION

The export file begins with a line with three fields.

- 1- an initial 'EXP'
- 2- what appears to be a constant of '0' for uncompressed files, and 1 for compressed files (FULL or PARTIAL).
- 3- the pathname for the creation of the export file

The export file ends with a line beginning 'EOS'.

The ARC files are included first, in the following order (note that all these sections are not always present):

- ARC
- CNT
- LAB
- PAL
- PAR
- TOL
- TXT, TX6, TX7, ...
- SIN

- LOG
- PRJ
- RXP
- RPL

Then the INFO files are included in alphabetical order (???not sure???). (There does not seem to be any real rule for the ordering of the INFO files, it probably depends on the version of Arc/Info that was used to generate the file. For instance, the .BND table sometimes comes first, but it also happens to come last with the .TIC...)

The beginning of each ARC file is indicated by the file name (a three-character identifier) followed by ' 2' for single-precision or ' 3' for double-precision. Floating point values carry 8 digits (ex: -1.0000000E+02) in single-precision coverages, and 15 digits (ex: -1.19299887000023E+02) in double-precision coverages.

However, there has to be an exception(!): double-precision floating point values inside INFO tables carry 18 digits (ex: -5.700000000000000000E+01).

Each ARC file ends with a line of seven numbers beginning with a -1 and followed by six zeros, except the SIN, LOG, and PRJ files which end in 'EOX', 'EOL', and 'EOP', respectively. The LAB file uses a slight variation of this -1 ending line (see below). The format for each ARC file is specific to that type of file. These formats are covered below.

TX6, TX7, RXP and RPL sections start with the usual "TX6 2", etc. line, and end with "JABBERWOCKY". These sections are divided in sub-sections (called "subclasses" in Arc/Info), each sub-section starts with a line with the name of the subclass, and end with the same "-1 0 0 0 0 0 0" line as the other ARC files (except for RXP sub-sections, which end with "-1 0" only).

The beginning of the INFO file section is indicated by 'IFO 2', and its end is indicated by 'EOI'. The INFO files each begin with the file name. For example, the polygon attribute table would be 'STDFIG24C.PAT' on a line by itself. The format is the same for every INFO file. This format is given below.

3. ARC FILE FORMATS

Formats will be given for the most common ARC files:

- ARC
- CNT
- LAB
- PAL
- PAR
- TOL

- TXT, TX6, TX7, ...
- SIN
- LOG
- PRJ
- RXP
- RPL

3.1 ARC

The ARC (arc coordinates and topology) file consists of repeating sets of arc information. The first line of each set has seven numbers:

- 1. coverage#
- 2. coverage-ID
- 3. from node
- 4. to node
- 5. left polygon
- 6. right polygon
- 7. number of coordinates

The subsequent lines of a set are the coordinates with two x-y pairs per line, if the coverage is single-precision. If there are an odd number of coordinates, the last line will have only one x-y pair. Double-precision puts one coordinate pair on each line.

An example of an actual ARC section follows:

```
ARC  2
      1      2      2      1      1
2      2
  3.4029994E+05 4.1001998E+06 3.4009988E+05 4.1002000E+06
      2      3      3      2      3
2      2
  3.4050000E+05 4.1001998E+06 3.4029994E+05 4.1001998E+06
      3      1      1      4      1
2      4
  3.4009988E+05 4.1002000E+06 3.4040006E+05 4.1003995E+06
  3.4090012E+05 4.1002000E+06 3.4070003E+05 4.1001995E+06
      4      4      4      3      4
2      2
  3.4070003E+05 4.1001995E+06 3.4050000E+05 4.1001998E+06
      5      6      3      4      4
3      3
```

```

3.4050000E+05 4.1001998E+06 3.4059997E+05 4.1001002E+06
3.4070003E+05 4.1001995E+06
      6      7      4      5      1
3      3
3.4070003E+05 4.1001995E+06 3.4079997E+05 4.1000002E+06
3.4019978E+05 4.1000000E+06
      7      5      5      2      1
3      2
3.4019978E+05 4.1000000E+06 3.4029994E+05 4.1001998E+06
      -1      0      0      0      0
0      0

```

An example of a double-precision ARC section follows:

```

ARC  3
      1      0      0      0      0
0      7
3.402000000000000E+05 4.100000000000000E+06
3.403000000000000E+05 4.100200000000000E+06
3.405000000000000E+05 4.100200000000000E+06
3.406000000000000E+05 4.100100000000000E+06
3.407000000000000E+05 4.100200000000000E+06
3.408000000000000E+05 4.100000000000000E+06
3.402000000000000E+05 4.100000000000000E+06
      2      0      0      0      0
0      4
3.401000000000000E+05 4.100200000000000E+06
3.404000000000000E+05 4.100400000000000E+06
3.409000000000000E+05 4.100200000000000E+06
3.401000000000000E+05 4.100200000000000E+06
      -1      0      0      0      0
0      0

```

3.2 CNT

The CNT (Polygon Centroid Coordinates) file contains the centroid of each polygon in the coverage. It has sets of centroid information with an initial coordinate line and, if there are labels, the label ids will follow, with up to 8 label ids per line.

The coordinate line has three fields:

- 1- number of labels in polygon

- 2- centroid x
- 3- centroid y

An example of an actual CNT section follows:

```

CNT    2
      0 3.4048516E+05 4.1001702E+06
      1 3.4046691E+05 4.1002662E+06
      1
      1 3.4048875E+05 4.1000852E+06
      2
      0 3.4060000E+05 4.1001665E+06
    -1          0          0          0          0
0      0

```

The following example shows centroids with more than one label attached to them:

```

CNT    2
      0-1.1930000E+02 4.9150002E+01
      1-1.1934029E+02 4.9169064E+01
      1
    13-1.1927331E+02 4.9168560E+01
      2          3          4          5          6
7      8          9
    10          11          12          13          14
      1-1.1921005E+02 4.9199642E+01
    15
    -1          0          0          0          0
0      0

```

3.3 LAB

The LAB (Label Points) section consists of repeating sets of label point information. The first line of each set has four numbers:

- 1. coverage-ID: Label User ID
- 2. Polygon ID: System ID of the polygon which encloses the label (or 0 in a point coverage)
- 3. x coordinate
- 4. y coordinate

The second and final line of the set gives the label box window. This information is marked as marked as obsolete in the SDL documentation. It currently contains repetitions of the x and y coordinates.

Note that the LAB section ends with a different '-1' line than the other files.

An example of an actual LAB section follows:

```
LAB    2
      1          2 3.4046650E+05 4.1002668E+06
3.4046650E+05 4.1002668E+06 3.4046650E+05 4.1002668E+06
      2          3 3.4048869E+05 4.1000852E+06
3.4048869E+05 4.1000852E+06 3.4048869E+05 4.1000852E+06
      -1          0 0.0000000E+00 0.0000000E+00
```

An example of a double-precision LAB section follows:

```
LAB    3
      1          2 3.405000000000000E+05 4.100062250000000E+06
3.405000000000000E+05 4.100062250000000E+06
3.405000000000000E+05 4.100062250000000E+06
      2          3 3.404688125000000E+05 4.100262250000000E+06
3.404688125000000E+05 4.100262250000000E+06
3.404688125000000E+05 4.100262250000000E+06
      -1          0 0.000000000000000E+00 0.000000000000000E+00
```

Labels are usually linked to the .PAT (Point or Polygon Attribute Table) file and the way LAB entries relate to .PAT records depends on the type of coverage.

In a POINT COVERAGE, the polygon ID in each label entry will always be 0 and in this case there would be a 1 to 1 relationship between the LAB entries and the .PAT records. I.E. Label#1 would correspond to .PAT record#1, etc...

In a POLYGON COVERAGE, labels are attached to polygons (PAL section) and their centroids, (CNT section), which are all linked to the .PAT table. In this case, the second value in a LAB entry is the associated polygon ID and can also be used as the 1-based record index in the .PAT table.

Also note that in a polygon coverage, there can be 0, 1 or more labels attached to each polygon. So we cannot assume that there is always a 1 to 1 relationship between labels and polygons.

Here is a portion of a E00 LAB section and the associated .PAT file:

```
LAB    2
      3027          2-1.5342091E+02 5.7450005E+01
-1.5342091E+02 5.7450005E+01-1.5342091E+02 5.7450005E+01
```

```

3063      3 1.0056972E+01 5.7236324E+01
1.0056972E+01 5.7236324E+01 1.0056972E+01 5.7236324E+01
12092      4-1.6142227E+02 5.5626617E+01
-1.6142227E+02 5.5626617E+01-1.6142227E+02 5.5626617E+01
12091      5-1.6280910E+02 5.5155094E+01
-1.6280910E+02 5.5155094E+01-1.6280910E+02 5.5155094E+01
12090      6-1.6383534E+02 5.4822258E+01
-1.6383534E+02 5.4822258E+01-1.6383534E+02 5.4822258E+01
3680      7-1.3228665E+02 5.3464508E+01
-1.3228665E+02 5.3464508E+01-1.3228665E+02 5.3464508E+01
...
...
COUNTRY.PAT      XX      4      4      16      270
AREA      4-1      14-1      12 3 60-1      -1      -1-
1      1-
PERIMETER      4-1      54-1      12 3 60-1      -1      -1-
1      2-
COUNTRY#      4-1      94-1      5-1 50-1      -1      -1-
1      3-
COUNTRY-ID      4-1      134-1      5-1 50-1      -1      -1-
1      4-
-2.1156395E+04 5.6565942E+03      1      0
9.2814314E-01 5.3587232E+00      2      3027
8.4326690E-01 5.9903331E+00      3      3063
6.9115734E-01 4.9834957E+00      4      12092
1.0414843E-01 1.2769473E+00      5      12091
5.7765609E-01 4.0451255E+00      6      12090
...
...

```

3.4 LOG

The LOG (Coverage History) file contains a free form set of lines of indeterminate number which are separated by lines which begins with a tilde, "~".

ARC records many commands and their resource impacts in this file. The standard ARC format for writing in the LOG has nine fields:

- Year (I4)
- Month (I2)
- Day (I2)
- Hours (I2)

- Minutes (I2)
- Connect Time in minutes (I4)
- CPU Time in seconds (I6)
- I/O Time in seconds (I6)
- Command line (A100)

However, any information can be added to the LOG file in free- form format.

An example of an actual LOG section follows:

```
LOG    2
19940118 849    0      3      35export cover landli stdfigc none
~
19940118 850    0      7     190clean landli landlicp # # poly
~
EOL
```

3.5 PAL

The PAL (Polygon Topology) file consists of repeating sets of polygon information. For single-precision, the first line of each set has five numbers:

- 1. number of arcs in polygon
- 2. x min of polygon
- 3. y min of polygon
- 4. x max of polygon
- 5. y max of polygon

The subsequent lines of a set give information on the arcs which comprise the polygon. There are three numbers per arc with information for two arcs per line.

- 1. Arc_Id (negative if reversed)
- 2. From_Node_Id (if arc is reversed, then this is the arc's To_Node_Id)
- 3. Adjacent_Polygon_Id (Id of the polygon that shares this arc with the current polygon)

The first polygon given is the universal polygon.

"The PAL file contains the polygon topology for a coverage and min-max boxes for the polygons. For each polygon in a coverage the PAL file has a (usually) clockwise list of the arcs, nodes that comprise the polygons, as well as the adjacent polygons, and a min-max box. To keep a continuous list, 'virtual' arcs with arc# of 0 are used to connect to holes (thus forming donuts), which are connected in counter-clockwise order. The PAL file is a random access, variable record length file, with the length dependent

on the number of arcs surrounding the polygon (1 to 10000).

The arc# in the PAL file is the record number of that arc within the coverage's ARC file, the node# is the same as the node# in the arc file at the appropriate end, and the polygon# is the record number of that polygon within the coverage's PAL file. The PAL file record number for a polygon is the same as the PAT file record number and the CNT file record number." SDL documentation, July 1989, p. 24.

An example of an actual PAL section follows:

```
PAL  2
      5 3.4009988E+05 4.1000000E+06 3.4090012E+05 4.1003995E
+06
      0      0      0      -1      1      2
     -7      2      3      -6      5      3
     -3      4      2
      4 3.4009988E+05 4.1001995E+06 3.4090012E+05 4.1003995E
+06
      1      2      1      3      1      1
      4      4      4      2      3      3
      4 3.4019978E+05 4.1000000E+06 3.4079997E+05 4.1001998E
+06
     -2      2      2      5      3      4
      6      4      1      7      5      1
      2 3.4050000E+05 4.1001002E+06 3.4070003E+05 4.1001998E
+06
     -4      3      2      -5      4      3
     -1      0      0      0      0
0      0
```

An example of a double precision PAL section follows:

```
PAL  3
      375-1.800000000000000E+02-9.000000000000000E+01
      1.800000000000000E+02 8.35960388183594E+01
      0      0      0      304      401      242
      0      0      0      -305      399      241
...
...
...
      2-1.800000000000000E+02 6.43997573852539E+01
     -1.69628768920898E+02 6.89338989257812E+01
     -332      428      1      -333      424      1
```

```

1-7.70438766479492E+01 6.72657470703125E+01
-7.49158401489258E+01 6.83600692749023E+01
-329 253 1
7-1.80000000000000E+02-9.00000000000000E+01
1.80000000000000E+02-6.32283134460449E+01
579 389 1 584 390 1
583 394 1 585 395 1
586 396 1 -588 430 1
587 429 1
-1 0 0 0 0 0
0 0
0.00000000000000E+00 0.00000000000000E+00

```

Note that the last line of the section (-1 plus 6 zeros) is followed by an extra line. IMHO, this line does not really belong there, but it has to be taken into account when reading the E00 file!!!

3.6 PRJ

The PRJ (Projection Parameters) file consists of a set of projection keywords and values including a set of parameters following the keyword "Parameters".

This file needs further research for specific keywords and parameters for the projections supported by ADS and MOSS.

An example of an actual PRJ section follows:

```

PRJ 2
Projection UTM
~
Zone 13
~
Datum NAD27
~
Zunits NO
~
Units METERS
~
Spheroid CLARKE1866
~
Xshift 0.0000000000
~
Yshift 0.0000000000

```

```

~
Parameters
~
EOP

```

3.7 SIN

Spatial Index

It usually is comprised of a single line with the value "EOX".

An example of an actual SIN section follows:

```

SIN    2
EOX

```

3.8 TOL

This consists of ten lines with a tolerance type, a tolerance status, and a tolerance value on each line. The tolerance types are:

- 1. fuzzy
- 2. generalize (unused)
- 3. node match (unused)
- 4. dangle
- 5. tic match
- 6. undefined
- 7. undefined
- 8. undefined
- 9. undefined
- 10. undefined

The tolerance status "is set to 1 if the tolerance is verified (been applied to operations of the coverage) and to 2 if the tolerance is not verified (been set by the TOLERANCE command, but not yet used in processing)."

An example of an actual TOL section follows:

```

TOL    2
      1      1  8.1813842E-01
      2      2  0.0000000E+00

```

```

3      2  0.00000000E+00
4      1  0.00000000E+00
5      2  0.00000000E+00
6      2  8.0025000E+00
7      2  8.0025000E-01
8      2  8.0025000E-01
9      2  8.0025000E-01
10     2  8.0025000E-01
-1     0              0              0              0
0      0

```

An example of a double-precision TOL section follows:

```

TOL    3
1      2  8.000000000000000E-02
2      2  0.000000000000000E+00
3      2  0.000000000000000E+00
4      2  0.000000000000000E+00
5      2  0.000000000000000E+00
6      2  8.000000000000000E+00
7      2  8.000000000000000E-01
8      2  8.000000000000000E-01
9      2  8.000000000000000E-01
10     2  8.000000000000000E-01
-1     0              0              0              0
0      0

```

Note that this section does not always contain ten lines, as we can see in the following example:

```

TOL    2
1      1  2.00000000E+00
4      2  0.00000000E-01
-1     0              0              0              0
0      0

```

3.9 TXT - Annotations

A TXT section starts with "TXT 2" or "TXT 3" and ends with the usual "-1 0 0 0 0 0" line.

Here is an example of an **empty TXT section**... (not very useful, I know, but it at least confirms that empty TXT sections can exist!):

```

TXT    2
      -1      0      0      0      0
0      0

```

Here is a double-precision TXT section:

```

TXT    3
      1      1      0      21      2
5.92753812500000E+05 0.00000000000000E+00 0.00000000000000E+00
0.00000000000000E+00 6.09405200000000E+06 0.00000000000000E+00
0.00000000000000E+00 0.00000000000000E+00 0.00000000000000E+00
0.00000000000000E+00 0.00000000000000E+00 0.00000000000000E+00
0.00000000000000E+00 0.00000000000000E+00 8.00000000000000E+01
-1.00000000E+02
AB
      1      1      0      21      3
5.98056937500000E+05 0.00000000000000E+00 0.00000000000000E+00
0.00000000000000E+00 6.08779850000000E+06 0.00000000000000E+00
0.00000000000000E+00 0.00000000000000E+00 0.00000000000000E+00
0.00000000000000E+00 0.00000000000000E+00 0.00000000000000E+00
0.00000000000000E+00 0.00000000000000E+00 8.00000000000000E+01
-1.00000000E+02
ABC
      -1      0      0      0      0
0      0

```

And this is an entry from a single-precision TXT:

```

TXT    2
      0      2      0      0      6
5.8053578E+05 5.8293578E+05 0.0000000E+00 0.0000000E+00
2.1061998E+06
2.1061998E+06 0.0000000E+00 0.0000000E+00 0.0000000E+00
0.0000000E+00
0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
5.0000000E+02
-1.0000000E+02
ABCDEF
      -1      0      0      0      0
0      0

```

- The first line of each entry contains 5 values:

1. LEVEL
 2. num_vertices1: for the line along which the text is drawn.
 3. num_vertices2: for the text arrow. If this value is negative then
 4. SYMBOL (Text Font)
 5. Number of chars. in text string
- Then we have 15 floating point values (when unused, these values default to 0.0000E+00):
 - Values 1 to 4 are the X coordinates of the line along which the text should be drawn (unused vertices are set to 0.000E+00)
 - Values 5 to 8 are the Y coordinates for this same line.
 - Values 9 to 11 are the X coordinates for the text arrow
 - Values 12 to 14 are the Y coordinates for the text arrow
 - The 15th value is probably the height???
 - Then the next line (line 5 for single, line 7 for double-prec.) contains an unknown value... in most cases, it is a value of -1.0000000E+02, but it is different sometimes. An important thing to note about this value is that it is always in single-precision format, even inside double-precision coverages.
 - And the the text string follows. Like the rest of the E00 file, the text string will be split in 80 characters lines if the annotation is longer than 80 chars. One should look at the string length parameter to know how many lines of text string to expect.

3.10 TX6/TX7 - Annotations

TX6/TX7 sections start with "TX6 2", etc. and end with a line with the word "JABBERWOCKY". They can contain several sub-sections (subclasses), each sub-section start with a line with the subclass name and ends with a "-1 0 0 0 0 0" line. The main (and only?) difference between TX6 and TX7 sections is that the first line of each entry in a TX7 section has one more value (8 values instead of 7).

Here is one entry from a single-precision TX7 section:

| | | | | | | |
|---|----|---|---|---|---|---|
| | 89 | 1 | 3 | 2 | 2 | |
| 0 | 10 | 0 | | | | |
| | 5 | 0 | 0 | 0 | 0 | |
| 0 | 0 | | | | | |
| | 0 | 0 | 0 | 0 | 0 | |
| 0 | 0 | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | |
| 0 | 0 | | | | | |
| | 0 | 0 | 0 | 0 | 0 | |

```

0          0
          0          0          0          0          0
-1.0000000E+02
 5.0997402E-04 0.0000000E+00 0.0000000E+00
-1.1926495E+02 5.0306187E+01
-1.1926391E+02 5.0306408E+01
-1.1926808E+02 5.0305916E+01
-1.1926808E+02 5.0305916E+01
-1.1926457E+02 5.0305916E+01
AB DEF GHIJ

```

- The first line contains 8 values:
 1. USER-ID
 2. LEVEL
 3. num_vertices1: for the line along which the text is drawn.
 4. num_vertices2: for the text arrow. If this value is negative then the arrow is reversed.
 5. SYMBOL (Text Font)
 6. ??? Always 0
 7. Number of chars. in text string
 8. ??? Always 0, this value is not present in a TX6
- Then we have 2 sets of 20 integer values, (3 lines each):
 - The first value of the first set is the text justification (See note below).
 - The first value of the second set seems to always be 1 ???
 - The 38 other values seem to be always 0.
- Then line 8 contains an unknown value... in most cases, it is a value of -1.0000000E+02, but it is different sometimes. An important thing to note about this value is that it is always in single-precision format, even inside double-precision coverages.
- And line 9 contains 3 values... the 1st one is probably the text height???
- Followed by (num_vertices1 + num_vertices2) pairs of coordinates.
- And the the text string follows. Like the rest of the E00 file, the text string will be split in 80 characters lines if the annotation is longer than 80 chars. One should look at the string length parameter to know how many lines of text string to expect.

Note about text justification:

If you look at the image [e00_textjust.gif](#), the red line indicates the line defined by the

coordinates of the text feature. The blue dot is the point of the line to which the text is aligned, and the black number is the actual text. Justifications (1,2,3) place text above the line, (4,5,6) place it centered on the line, and (7,8,9) place the text below the line. Horizontally, (1,4,7) left-align the text to the first coordinate of the text line, (2,5,8) center-align the text to the midpoint of the text line, and (3,6,9) right-align the text to the last coordinate of the line.

A TX6 section in a double-precision coverage:

```
TX6    3
STREETS
      1      1      2      0      5
0      7
      1      0      0      0      0
0      0
      0      0      0      0      0
0      0
      0      0      0      0      0      0
      0      0      0      0      0
0      0
      0      0      0      0      0
0      0
      0      0      0      0      0      0
-1.00000000E+02
 6.0000000000000000E+00 0.0000000000000000E+00 0.0000000000000000E+00
 4.473483399900000E+06 5.330745719970000E+06
 4.473483399900000E+06 5.330745719970000E+06
ABCDEFG
      2      1      3      0      5
0      18
      1      0      0      0      0
0      0
      0      0      0      0      0
0      0
      0      0      0      0      0      0
      0      0      0      0      0
0      0
      0      0      0      0      0
0      0
      0      0      0      0      0      0
-1.00000000E+02
 3.5000000000000000E+00 0.0000000000000000E+00 0.0000000000000000E+00
 4.473472799800000E+06 5.330874579830000E+06
```

```

4.47347279980000E+06 5.33087457983000E+06
4.47351938175583E+06 5.33083216377889E+06
ABCDEFGHIJ JKLMNOPQ
          -1          0          0          0          0
0          0
DESC
          497          2          2          0          1
0          10
          1          0          0          0          0
0          0
          0          0          0          0          0
0          0
          0          0          0          0          0
          0          0          0          0          0
0          0
          0          0          0          0          0
0          0
          0          0          0          0          0
-1.00000000E+02
2.50000000000000E+00 0.00000000000000E+00 0.00000000000000E+00
4.47363686987000E+06 5.33098710986000E+06
4.47363686987000E+06 5.33098710986000E+06
ABCDEFGHIJ
          -1          0          0          0          0
0          0
JABBERWOCKY

```

3.11 RXP - Specific to Regions

RXP sections are specific to region coverages. They contains sub-sections, corresponding to the region subclasses. As for the other sections of this type, it ends with a "JABBERWOCKY" line.

The RXP section seems to connect the region ids for each subclass to the polygons (from the PAL section) that are part of each region. The first column would be the region IDs, and the second column the corresponding PAL polygon IDs...

The format is quite simple:

```

RXP    2
NAME1
          1          159
        -1          0

```

```

OTHER_NAME
    1      214
    1      216
    1      217
    1      218
    1      222
    1      226
    1      227
   -1       0
LAST_NAME
    1      28
    1      31
    1      36
    1      47
    1      48
   -1       0
JABBERWOCKY

```

3.12 RPL - Specific to Regions

RPL sections are also specific to region coverages. The RPL section contains one or more subsections (called subclasses in Arc/Info)... like for all other section types that contain subclasses, it ends with a JABBERWOCKY line. Each region subclass is in the exact same format as a PAL section, the difference is that each entry in a RPL subclass seems to contain the list of arcs that define a region and not a single polygon.

Here is an example of a single-precision RPL section:

```

RPL  2
NAME1
    8  7.0712538E+05  6.1982350E+06  7.3062950E+05  6.2321335E
+06
    677      548      0      -671      543      0
   -670      542      0       632      513      0
    631      510      0     -660      504      0
   -686      535      0     -676      547      0
    -1       0      0       0      0
0      0
OTHER_NAME
    20  3.0415478E+05  5.9847795E+06  3.6067356E+05  6.0342510E
+06
   -876      709      0     -877      706      0

```

| | | | | | |
|-------------|---------------|---------------|---------------|------------|---|
| 0 | 0 | 0 | 913 | 731 | 0 |
| 886 | 715 | 0 | 879 | 711 | 0 |
| -881 | 707 | 0 | -883 | 712 | 0 |
| -912 | 713 | 0 | -919 | 730 | 0 |
| -920 | 735 | 0 | 0 | 0 | 0 |
| -935 | 745 | 0 | -936 | 746 | 0 |
| -931 | 738 | 0 | -934 | 744 | 0 |
| 0 | 0 | 0 | -928 | 741 | 0 |
| -929 | 742 | 0 | -927 | 740 | 0 |
| -1 | 0 | 0 | 0 | 0 | |
| 0 | 0 | | | | |
| LAST_NAME | | | | | |
| 215 | 3.1433966E+05 | 6.0253455E+06 | 6.7686263E+05 | 6.5089305E | |
| +06 | | | | | |
| 112 | 89 | 0 | 0 | 0 | 0 |
| 115 | 85 | 0 | 114 | 91 | 0 |
| 104 | 76 | 0 | 0 | 0 | 0 |
| 169 | 103 | 0 | 168 | 139 | 0 |
| ... | | | | | |
| ... | | | | | |
| -1 | 0 | 0 | 0 | 0 | |
| 0 | 0 | | | | |
| JABBERWOCKY | | | | | |

4. INFO FILE FORMATS

INFO files follow the same format:

1. name of the info file and summary information
2. definitions for each of the attributes
3. actual data values

The name line consists of six fields:

Note: the values inside brackets are the start-end position of the field in the line.

1. (0-31) name of the INFO file
2. (32-33) external flag: "XX" indicates an external table (stored in the coverage directory) and " " indicates an internal table (stored in the info directory).
3. (34-37) number of attributes in a record (valid attributes only)
4. (38-41) number of attributes total, including deleted ones (deleted attributes have an index of -1)
5. (42-45) length of data record

6. (46-55) number of data records

The definitions for each attribute consist of eight fields:

1. (0-15) name of attribute
2. (16-18) attribute size in its internal (binary) representation
3. (19-20) appears to be constant of '-1'
4. (21-24) start position of attribute in the binary data records
5. (25-25) appears to be constant of '4'
6. (26-27) appears to be constant of '-1'
7. (28-31) attribute output format width (see below for discussion)
8. (32-33) attribute output format precision
9. (34-36) type of attribute (see below for discussion)
10. (37-38) appears to be constant of '-1'
11. (39-42) appears to be constant of '-1'
12. (43-46) appears to be constant of '-1'
13. (47-48) appears to be constant of '-1'
14. (49-64) Alternate field name (almost always blank)
15. (65-69) attribute index (sequential identifier starting at 1, value of -1 for deleted attributes which should be ignored)

The output format field is handled differently for numeric and character attributes. Numeric attributes give the output width followed by a space then the number of decimal positions. Character attributes give the output width followed by a constant of '-1'.

The type of the attribute is specified by the following codes:

```

10-1 (D) Date (stored as 8 bytes, display width must be either
           8 chars (12/31/99) or 10 chars (12/31/1999) )
20-1 (C) Character string
30-1 (I) Integer with fixed number of digits (1 byte storage
per digit)
40-1 (N) Numeric value with decimals and fixed number of
digits
           (using 1 byte storage per digit in memory)
50-1 (B) Binary integer (2 or 4 bytes)
60-1 (F) Binary float (4 or 8 bytes, depends on coverage
precision)
```

Here is the form that each data type takes in the data records of an E00 INFO table:

```
10 (D) 8 characters
```

```

20 (C) Nbr of chars = attribute size (field 2 in attr. def.
line).
30 (I) Nbr of chars = attribute size (field 2 in attr. def.
line),
        value is right-justified
40 (N) stored as single prec. floats = 14 chars, ex: "-
1.7735416E+00"
        (Uses 1 byte storage per digit internally, but always
stored
        as single precision floats in both single and double
precision E00 tables.)
50 (B) 32 bits integer = 11 chars total, right-justified
        16 bits integer = 6 chars total, right-justified
60 (F) single prec. = 14 chars total, ex: "-1.7735416E+00"
        double prec. = 24 chars total, ex: "-
2.603588750000000000E+05"

```

Note that it is possible to have 4 bytes binary floats inside double-precision tables, or to have 8 bytes binary floats inside single-precision tables. The representation used for the Binary float values inside the E00 table data records is on 14 chars for 4 byte floats, and 24 chars for 8 byte floats, independently of the precision of the coverage. (eg. 4 bytes floats would use 14 chars (-1.7735416E+00) even inside a double-precision table, and 8 byte floats will always use 24 chars, even inside single-precision tables).

Formats will be given for the most common INFO files:

- .AAT
- .ACODE
- .BND
- .PAT
- .PCODE
- .TIC

4.1 .AAT

The .AAT (Arc Attribute Table) contains seven fields whose attribute names are self-explanatory. However, additional attributes may be added as desired, after the -ID attribute.

An example of an actual .AAT section follows:

```

LANDL1CL.AAT
FNODE#          4-1    14-1    5-1  50-1    -1    -1-
1              1-

```

| | | | | | | | | |
|-------------|---|---|-----|-------|------|------|----|------------|
| TNODE# | | | 4-1 | 54-1 | 5-1 | 50-1 | -1 | -1- |
| 1 | | | 2- | | | | | |
| LPOLY# | | | 4-1 | 94-1 | 5-1 | 50-1 | -1 | -1- |
| 1 | | | 3- | | | | | |
| RPOLY# | | | 4-1 | 134-1 | 5-1 | 50-1 | -1 | -1- |
| 1 | | | 4- | | | | | |
| LENGTH | | | 4-1 | 174-1 | 12 3 | 60-1 | -1 | -1- |
| 1 | | | 5- | | | | | |
| LANDLICL# | | | 4-1 | 214-1 | 5-1 | 50-1 | -1 | -1- |
| 1 | | | 6- | | | | | |
| LANDLICL-ID | | | 4-1 | 254-1 | 5-1 | 50-1 | -1 | -1- |
| 1 | | | 7- | | | | | |
| | 2 | | 1 | | 0 | | 0 | 2.0006265E |
| +02 | | 1 | | | | | | |
| 2 | | | | | | | | |
| | | 3 | | 2 | 0 | | 0 | 2.0006250E |
| +02 | | 2 | | | | | | |
| 3 | | | | | | | | |
| | | 1 | | 4 | 0 | | 0 | 1.0989176E |
| +03 | | 3 | | | | | | |
| 1 | | | | | | | | |
| | | 4 | | 3 | 0 | | 0 | 2.0003140E |
| +02 | | 4 | | | | | | |
| 4 | | | | | | | | |
| | | 3 | | 4 | 0 | | 0 | 2.8198248E |
| +02 | | 5 | | | | | | |
| 6 | | | | | | | | |
| | | 4 | | 5 | 0 | | 0 | 8.2309576E |
| +02 | | 6 | | | | | | |
| 7 | | | | | | | | |
| | | 5 | | 2 | 0 | | 0 | 2.2345322E |
| +02 | | 7 | | | | | | |
| 5 | | | | | | | | |

4.2 .ACODE

The .ACODE (Arc Lookup Table) contains seven fields whose attribute names are the same (except the -ID) as that in the ADS files documentation. However, additional attributes should be able to be added as desired, after the LABEL attribute.

An example of an actual .ACODE section follows:

| | | | | | | | |
|-----------------|------|---------------|---------------|---------------|------------|-----|---|
| LANDLCP.AC CODE | | | | 8 | 8 | 80 | 7 |
| LANDLCP-ID | 4-1 | 14-1 | 8-1 | 50-1 | -1 | -1- | |
| 1 | 1- | | | | | | |
| XLABEL | 4-1 | 54-1 | 8 2 | 60-1 | -1 | -1- | |
| 1 | 2- | | | | | | |
| YLABEL | 4-1 | 94-1 | 8 2 | 60-1 | -1 | -1- | |
| 1 | 3- | | | | | | |
| SIZE | 4-1 | 134-1 | 8 2 | 60-1 | -1 | -1- | |
| 1 | 4- | | | | | | |
| ANGLE | 4-1 | 174-1 | 8 2 | 60-1 | -1 | -1- | |
| 1 | 5- | | | | | | |
| SZLBL | 4-1 | 214-1 | 4-1 | 50-1 | -1 | -1- | |
| 1 | 6- | | | | | | |
| IFONTF | 4-1 | 254-1 | 4-1 | 50-1 | -1 | -1- | |
| 1 | 7- | | | | | | |
| LABEL | 52-1 | 294-1 | 52-1 | 20-1 | -1 | -1- | |
| 1 | 8- | | | | | | |
| | 1 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |
| | 2 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |
| | 3 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |
| | 4 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |
| | 5 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |
| | 6 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |
| | 7 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E | | |
| +00 | 0 | | | | | | |
| | 0 | | | | | | |

4.3 .BND

The .BND (Coverage Min/Max Coordinates) table contains four fields whose attribute names are self-explanatory.

An example of an actual .BND section follows:

```

LANDLICP.BND
XX      4      4      16      1
XMIN      4-1      14-1      12 3 60-1      -1      -1-
1              1-
YMIN      4-1      54-1      12 3 60-1      -1      -1-
1              2-
XMAX      4-1      94-1      12 3 60-1      -1      -1-
1              3-
YMAX      4-1      134-1      12 3 60-1      -1      -1-
1              4-
3.4009988E+05 4.1000000E+06 3.4090012E+05 4.1003995E+06

```

An example of a double-precision .BND section follows:

```

STDFIG11CPX.BND
XX      4      4      32      1
XMIN      8-1      14-1      18 5 60-1      -1      -1-
1              1-
YMIN      8-1      94-1      18 5 60-1      -1      -1-
1              2-
XMAX      8-1      174-1      18 5 60-1      -1      -1-
1              3-
YMAX      8-1      254-1      18 5 60-1      -1      -1-
1              4-
3.401000000000000000E+05 4.100000000000000000E+06
3.409000000000000000E+05
4.10040
000000000000E+06

```

4.4 .PAT

The .PAT (Polygon or Point Attribute Table) contains four fields whose attribute names are self-explanatory. However, additional attributes may be added as desired, after the -ID attribute.

An example of an actual .PAT section follows:

```

LANDLICP.PAT
XX      4      4      16      4
AREA      4-1      14-1      12 3 60-1      -1      -1-
1              1-
PERIMETER  4-1      54-1      12 3 60-1      -1      -1-
1              2-

```

| | | | | | | | |
|----------------|---------------|-------|-----|------|----|-----|---|
| LANDLICP# | 4-1 | 94-1 | 5-1 | 50-1 | -1 | -1- | |
| 1 | 3- | | | | | | |
| LANDLICP-ID | 4-1 | 134-1 | 5-1 | 50-1 | -1 | -1- | |
| 1 | 4- | | | | | | |
| -1.7982806E+05 | 2.3455293E+03 | | | 1 | | | 0 |
| 8.0025000E+04 | 1.6990741E+03 | | | 2 | | | 1 |
| 8.9864000E+04 | 1.5285940E+03 | | | 3 | | | 2 |
| 9.9390586E+03 | 4.8201389E+02 | | | 4 | | | 0 |

An example of a double-precision .PAT section follows:

| | | | | | | | | |
|---------------------------|--------------------------|-------|------|------|------|-----|-----|---|
| STDFIG11CPX.PAT | | | XX | 5 | 5 | 54 | | 3 |
| AREA | 8-1 | 14-1 | 18 | 5 | 60-1 | -1 | -1- | |
| 1 | 1- | | | | | | | |
| PERIMETER | 8-1 | 94-1 | 18 | 5 | 60-1 | -1 | -1- | |
| 1 | 2- | | | | | | | |
| STDFIG11CPX# | 4-1 | 174-1 | 5-1 | 50-1 | -1 | -1- | | |
| 1 | 3- | | | | | | | |
| STDFIG11CPX-ID | 4-1 | 214-1 | 5-1 | 50-1 | -1 | -1- | | |
| 1 | 4- | | | | | | | |
| DATA | 30-1 | 254-1 | 30-1 | 20-1 | -1 | -1- | | |
| 1 | 5- | | | | | | | |
| -1.700000000000000000E+05 | 0.000000000000000000E+00 | | | | | | | |
| 1 | 0 | | | | | | | |
| | | | | | | | | |
| 9.000000000000000000E+04 | 1.53005627441406250E+03 | | | | | | | |
| 2 | 1SMALL | | | | | | | |
| | | | | | | | | |
| 8.000000000000000000E+04 | 1.69907165527343750E+03 | | | | | | | |
| 3 | 2LARGE | | | | | | | |

4.5 .PCODE

The .PCODE (Polygon Lookup Table) contains eight fields whose attribute names are the same (except the -ID) as that in the ADS files documentation. However, additional attributes should be able to be added as desired, after the LABEL attribute.

An example of an actual .PCODE section follows:

| | | | | | | | |
|----------------|-----|------|-----|------|----|-----|---|
| LANDLICP.PCODE | | | 8 | 8 | 80 | | 2 |
| LANDLICP-ID | 4-1 | 14-1 | 8-1 | 50-1 | -1 | -1- | |
| 1 | 1- | | | | | | |

```

XLABEL          4-1    54-1    8 2 60-1    -1    -1-
1                2-
YLABEL          4-1    94-1    8 2 60-1    -1    -1-
1                3-
SIZE            4-1    134-1    8 2 60-1    -1    -1-
1                4-
ANGLE           4-1    174-1    8 2 60-1    -1    -1-
1                5-
SZLBL           4-1    214-1    4-1 50-1    -1    -1-
1                6-
IFONTF          4-1    254-1    4-1 50-1    -1    -1-
1                7-
LABEL           52-1    294-1    52-1 20-1    -1    -1-
1                8-
                1 1.6050000E+00 1.4490000E+00 7.0000000E-02 0.0000000E
+00                5
                0LARGE
                2 1.6470000E+00 1.1520000E+00 7.0000000E-02 0.0000000E
+00                5
                0SMALL

```

4.6 .TIC

The .TIC (Tic Coordinates) table contains three fields whose attribute names are self-explanatory.

An example of an actual .TIC section follows:

```

LANDLICP.TIC          XX    3    3    12          4
IDTIC                 4-1    14-1    5-1 50-1    -1    -1-
1                     1-
XTIC                  4-1    54-1    12 3 60-1    -1    -1-
1                     2-
YTIC                  4-1    94-1    12 3 60-1    -1    -1-
1                     3-
                1 3.4009244E+05 4.1000002E+06
                2 3.4010028E+05 4.1004150E+06
                3 3.4090753E+05 4.1003998E+06
                4 3.4089972E+05 4.0999850E+06

```

An example of a double-precision .TIC section follows:

```

STDFIG11CPX.TIC          XX    3    3    20          4

```

```

IDTIC      4-1    14-1    5-1 50-1    -1    -1-
1          1-
XTIC      8-1    54-1    18 5 60-1    -1    -1-
1          2-
YTIC      8-1    134-1    18 5 60-1    -1    -1-
1          3-
1 3.4090000000000000000E+05 4.1000000000000000000E+06
4 3.4090000000000000000E+05 4.1004000000000000000E+06
2 3.4010000000000000000E+05 4.1000000000000000000E+06
3 3.4010000000000000000E+05 4.1004000000000000000E+06

```

5. CONCLUSION

The content and format of the ARC EXPORT file seems to be straightforward in most cases. The remaining areas of uncertainty include:

- the meaning of the 'SIN 2' section
- the precise format of the PRJ file for different projections
- possible variation in the '-1' suffixes of INFO definitions

However, none of these appears to be that serious, and the indicated formats should be used to identify any errors or limitations.

Because this information was derived from limited experimentation, it should be considered as tentative and subject to revision at any time.

APPENDIX A: SAMPLE EXPORT FILE BEFORE TOPOLOGY

The following is a listing of an export file.

```

EXP  0  /HOME/ME/ARC/SAMPLE.E00
ARC   2
      1      1      0      0      0      0      4
3.4009988E+05 4.1002000E+06 3.4040006E+05 4.1003995E+06
3.4090012E+05 4.1002000E+06 3.4070003E+05 4.1001995E+06
      2      2      0      0      0      0      2
3.4029994E+05 4.1001998E+06 3.4009988E+05 4.1002000E+06
      3      3      0      0      0      0      2
3.4050000E+05 4.1001998E+06 3.4029994E+05 4.1001998E+06

```

| | | | | | | |
|---------------|---------------|---------------|---------------|---|---|---|
| 4 | 4 | 0 | 0 | 0 | 0 | 2 |
| 3.4070003E+05 | 4.1001995E+06 | 3.4050000E+05 | 4.1001998E+06 | | | |
| 5 | 5 | 0 | 0 | 0 | 0 | 2 |
| 3.4019978E+05 | 4.1000000E+06 | 3.4029994E+05 | 4.1001998E+06 | | | |
| 6 | 6 | 0 | 0 | 0 | 0 | 3 |
| 3.4050000E+05 | 4.1001998E+06 | 3.4059997E+05 | 4.1001002E+06 | | | |
| 3.4070003E+05 | 4.1001995E+06 | | | | | |
| 7 | 7 | 0 | 0 | 0 | 0 | 3 |
| 3.4070003E+05 | 4.1001995E+06 | 3.4079997E+05 | 4.1000002E+06 | | | |
| 3.4019978E+05 | 4.1000000E+06 | | | | | |
| -1 | 0 | 0 | 0 | 0 | 0 | 0 |

LAB 2

| | | | | | | |
|---------------|---------------|---------------|---------------|--|--|--|
| 1 | 0 | 3.4046650E+05 | 4.1002668E+06 | | | |
| 3.4046650E+05 | 4.1002668E+06 | 3.4046650E+05 | 4.1002668E+06 | | | |
| 2 | 0 | 3.4048869E+05 | 4.1000852E+06 | | | |
| 3.4048869E+05 | 4.1000852E+06 | 3.4048869E+05 | 4.1000852E+06 | | | |
| -1 | 0 | 0.0000000E+00 | 0.0000000E+00 | | | |

TOL 2

| | | | | | | |
|----|---|---------------|---|---|---|---|
| 1 | 2 | 8.0756250E-02 | | | | |
| 2 | 2 | 0.0000000E+00 | | | | |
| 3 | 2 | 0.0000000E+00 | | | | |
| 4 | 2 | 0.0000000E+00 | | | | |
| 5 | 2 | 0.0000000E+00 | | | | |
| 6 | 2 | 8.0756250E+00 | | | | |
| 7 | 2 | 8.0756250E-01 | | | | |
| 8 | 2 | 8.0756250E-01 | | | | |
| 9 | 2 | 8.0756250E-01 | | | | |
| 10 | 2 | 8.0756250E-01 | | | | |
| -1 | 0 | 0 | 0 | 0 | 0 | 0 |

SIN 2

EOX

PRJ 2

Projection UTM

~

Zone 13

~

Datum NAD27

~

Zunits NO

~

Units METERS

~

Spheroid CLARKE1866

~

Xshift 0.0000000000

~

Yshift 0.0000000000

~

Parameters

~

EOP

IFO 2

LANDLI.AC CODE 8 8 80 7

LANDLI-ID 4-1 14-1 8-1 50-1 -1 -1-1 1-

XLABEL 4-1 54-1 8 2 60-1 -1 -1-1 2-

YLABEL 4-1 94-1 8 2 60-1 -1 -1-1 3-

SIZE 4-1 134-1 8 2 60-1 -1 -1-1 4-

ANGLE 4-1 174-1 8 2 60-1 -1 -1-1 5-

SZLBL 4-1 214-1 4-1 50-1 -1 -1-1 6-

IFONTF 4-1 254-1 4-1 50-1 -1 -1-1 7-

LABEL 52-1 294-1 52-1 20-1 -1 -1-1 8-

1 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
2 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
3 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
4 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
5 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
6 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
7 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
00
7 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E+00
+00 00
0

LANDLI.BND XX 4 4 16 1

XMIN 4-1 14-1 12 3 60-1 -1 -1-1 1-

YMIN 4-1 54-1 12 3 60-1 -1 -1-1 2-

XMAX 4-1 94-1 12 3 60-1 -1 -1-1 3-

```

YMAX          4-1  134-1  12 3 60-1  -1  -1-1          4-
  3.4009612E+05 4.0999870E+06 3.4090369E+05 4.1004052E+06
LANDLI.PCODE          8      8  80          2
LANDLI-ID        4-1    14-1    8-1 50-1  -1  -1-1          1-
XLABEL           4-1    54-1    8 2 60-1  -1  -1-1          2-
YLABEL           4-1    94-1    8 2 60-1  -1  -1-1          3-
SIZE             4-1   134-1    8 2 60-1  -1  -1-1          4-
ANGLE            4-1   174-1    8 2 60-1  -1  -1-1          5-
SZLBL            4-1   214-1    4-1 50-1  -1  -1-1          6-
IFONTF           4-1   254-1    4-1 50-1  -1  -1-1          7-
LABEL            52-1   294-1   52-1 20-1  -1  -1-1          8-
      1 1.6050000E+00 1.4490000E+00 7.0000000E-02 0.0000000E
+00      5
      0LARGE
      2 1.6470000E+00 1.1520000E+00 7.0000000E-02 0.0000000E
+00      5
      0SMALL
LANDLI.TIC          XX      3      3 12          4
IDTIC             4-1    14-1    5-1 50-1  -1  -1-1          1-
XTIC              4-1    54-1   12 3 60-1  -1  -1-1          2-
YTIC              4-1    94-1   12 3 60-1  -1  -1-1          3-
      1 3.4009244E+05 4.1000002E+06
      2 3.4010028E+05 4.1004150E+06
      3 3.4090753E+05 4.1003998E+06
      4 3.4089972E+05 4.0999850E+06
EOI
EOS

```

APPENDIX B: SAMPLE EXPORT FILE AFTER POLYGON TOPOLOGY

```

EXP  0  /HOME/ME/SAMPLE.E00
ARC  2
      1      2      2      1      1      2      2
  3.4029994E+05 4.1001998E+06 3.4009988E+05 4.1002000E+06
      2      3      3      2      3      2      2
  3.4050000E+05 4.1001998E+06 3.4029994E+05 4.1001998E+06
      3      1      1      4      1      2      4
  3.4009988E+05 4.1002000E+06 3.4040006E+05 4.1003995E+06
  3.4090012E+05 4.1002000E+06 3.4070003E+05 4.1001995E+06
      4      4      4      3      4      2      2
  3.4070003E+05 4.1001995E+06 3.4050000E+05 4.1001998E+06

```

| | | | | | | | |
|-----|---------------|---------------|---------------|---------------|---------------|---|---|
| | 5 | 6 | 3 | 4 | 4 | 3 | 3 |
| | 3.4050000E+05 | 4.1001998E+06 | 3.4059997E+05 | 4.1001002E+06 | | | |
| | 3.4070003E+05 | 4.1001995E+06 | | | | | |
| | 6 | 7 | 4 | 5 | 1 | 3 | 3 |
| | 3.4070003E+05 | 4.1001995E+06 | 3.4079997E+05 | 4.1000002E+06 | | | |
| | 3.4019978E+05 | 4.1000000E+06 | | | | | |
| | 7 | 5 | 5 | 2 | 1 | 3 | 2 |
| | 3.4019978E+05 | 4.1000000E+06 | 3.4029994E+05 | 4.1001998E+06 | | | |
| | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| CNT | 2 | | | | | | |
| | 0 | 3.4048516E+05 | 4.1001702E+06 | | | | |
| | 1 | 3.4046691E+05 | 4.1002662E+06 | | | | |
| | 1 | | | | | | |
| | 1 | 3.4048875E+05 | 4.1000852E+06 | | | | |
| | 2 | | | | | | |
| | 0 | 3.4060000E+05 | 4.1001665E+06 | | | | |
| | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| LAB | 2 | | | | | | |
| | 1 | 2 | 3.4046650E+05 | 4.1002668E+06 | | | |
| | 3.4046650E+05 | 4.1002668E+06 | 3.4046650E+05 | 4.1002668E+06 | | | |
| | 2 | 3 | 3.4048869E+05 | 4.1000852E+06 | | | |
| | 3.4048869E+05 | 4.1000852E+06 | 3.4048869E+05 | 4.1000852E+06 | | | |
| | -1 | 0 | 0.0000000E+00 | 0.0000000E+00 | | | |
| PAL | 2 | | | | | | |
| | 5 | 3.4009988E+05 | 4.1000000E+06 | 3.4090012E+05 | 4.1003995E+06 | | |
| | 0 | 0 | 0 | -1 | 1 | 2 | |
| | -7 | 2 | 3 | -6 | 5 | 3 | |
| | -3 | 4 | 2 | | | | |
| | 4 | 3.4009988E+05 | 4.1001995E+06 | 3.4090012E+05 | 4.1003995E+06 | | |
| | 1 | 2 | 1 | 3 | 1 | 1 | |
| | 4 | 4 | 4 | 2 | 3 | 3 | |
| | 4 | 3.4019978E+05 | 4.1000000E+06 | 3.4079997E+05 | 4.1001998E+06 | | |
| | -2 | 2 | 2 | 5 | 3 | 4 | |
| | 6 | 4 | 1 | 7 | 5 | 1 | |
| | 2 | 3.4050000E+05 | 4.1001002E+06 | 3.4070003E+05 | 4.1001998E+06 | | |
| | -4 | 3 | 2 | -5 | 4 | 3 | |
| | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOL | 2 | | | | | | |
| | 1 | 1 | 8.1813842E-01 | | | | |
| | 2 | 2 | 0.0000000E+00 | | | | |
| | 3 | 2 | 0.0000000E+00 | | | | |
| | 4 | 1 | 0.0000000E+00 | | | | |
| | 5 | 2 | 0.0000000E+00 | | | | |

| | | | | | | | |
|----|---|---------------|---|---|---|---|---|
| 6 | 2 | 8.0025000E+00 | | | | | |
| 7 | 2 | 8.0025000E-01 | | | | | |
| 8 | 2 | 8.0025000E-01 | | | | | |
| 9 | 2 | 8.0025000E-01 | | | | | |
| 10 | 2 | 8.0025000E-01 | | | | | |
| -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

SIN 2

EOX

LOG 2

19940118 849 0 3 35export cover landli stdfigc none

~

19940118 850 0 7 190clean landli landlicp # # poly

~

EOL

PRJ 2

Projection UTM

~

Zone 13

~

Datum NAD27

~

Zunits NO

~

Units METERS

~

Spheroid CLARKE1866

~

Xshift 0.0000000000

~

Yshift 0.0000000000

~

Parameters

~

EOP

IFO 2

LANDLICP.ACODE 8 8 80 7

| | | | | | | | |
|-------------|-----|------|-----|------|----|------|----|
| LANDLICP-ID | 4-1 | 14-1 | 8-1 | 50-1 | -1 | -1-1 | 1- |
|-------------|-----|------|-----|------|----|------|----|

| | | | | | | | |
|--------|-----|------|-----|------|----|------|----|
| XLABEL | 4-1 | 54-1 | 8 2 | 60-1 | -1 | -1-1 | 2- |
|--------|-----|------|-----|------|----|------|----|

| | | | | | | | |
|--------|-----|------|-----|------|----|------|----|
| YLABEL | 4-1 | 94-1 | 8 2 | 60-1 | -1 | -1-1 | 3- |
|--------|-----|------|-----|------|----|------|----|

| | | | | | | | |
|------|-----|-------|-----|------|----|------|----|
| SIZE | 4-1 | 134-1 | 8 2 | 60-1 | -1 | -1-1 | 4- |
|------|-----|-------|-----|------|----|------|----|

| | | | | | | | |
|-------|-----|-------|-----|------|----|------|----|
| ANGLE | 4-1 | 174-1 | 8 2 | 60-1 | -1 | -1-1 | 5- |
|-------|-----|-------|-----|------|----|------|----|

| | | | | | | | |
|-------|-----|-------|-----|------|----|------|----|
| SZLBL | 4-1 | 214-1 | 4-1 | 50-1 | -1 | -1-1 | 6- |
|-------|-----|-------|-----|------|----|------|----|

| | | | | | | | |
|--------|-----|-------|-----|------|----|------|----|
| IFONTF | 4-1 | 254-1 | 4-1 | 50-1 | -1 | -1-1 | 7- |
|--------|-----|-------|-----|------|----|------|----|

| | | | | | | | |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----|
| LABEL | 52-1 | 294-1 | 52-1 | 20-1 | -1 | -1-1 | 8- |
| 1 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| 2 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| 3 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| 4 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| 5 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| 6 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| 7 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | |
| +00 | 0 | | | | | | |
| 0 | | | | | | | |
| LANDLICP.BND | | | XX | 4 | 4 | 16 | 1 |
| XMIN | 4-1 | 14-1 | 12 3 | 60-1 | -1 | -1-1 | 1- |
| YMIN | 4-1 | 54-1 | 12 3 | 60-1 | -1 | -1-1 | 2- |
| XMAX | 4-1 | 94-1 | 12 3 | 60-1 | -1 | -1-1 | 3- |
| YMAX | 4-1 | 134-1 | 12 3 | 60-1 | -1 | -1-1 | 4- |
| 3.4009988E+05 | 4.1000000E+06 | 3.4090012E+05 | 4.1003995E+06 | | | | |
| LANDLICP.PAT | | | XX | 4 | 4 | 16 | 4 |
| AREA | 4-1 | 14-1 | 12 3 | 60-1 | -1 | -1-1 | 1- |
| PERIMETER | 4-1 | 54-1 | 12 3 | 60-1 | -1 | -1-1 | 2- |
| LANDLICP# | 4-1 | 94-1 | 5-1 | 50-1 | -1 | -1-1 | 3- |
| LANDLICP-ID | 4-1 | 134-1 | 5-1 | 50-1 | -1 | -1-1 | 4- |
| -1.7982806E+05 | 2.3455293E+03 | | 1 | | | 0 | |
| 8.0025000E+04 | 1.6990741E+03 | | 2 | | | 1 | |
| 8.9864000E+04 | 1.5285940E+03 | | 3 | | | 2 | |
| 9.9390586E+03 | 4.8201389E+02 | | 4 | | | 0 | |
| LANDLICP.PCODE | | | 8 | 8 | 80 | 2 | |
| LANDLICP-ID | 4-1 | 14-1 | 8-1 | 50-1 | -1 | -1-1 | 1- |
| XLABEL | 4-1 | 54-1 | 8 2 | 60-1 | -1 | -1-1 | 2- |
| YLABEL | 4-1 | 94-1 | 8 2 | 60-1 | -1 | -1-1 | 3- |
| SIZE | 4-1 | 134-1 | 8 2 | 60-1 | -1 | -1-1 | 4- |
| ANGLE | 4-1 | 174-1 | 8 2 | 60-1 | -1 | -1-1 | 5- |

```

SZLBL          4-1  214-1    4-1 50-1   -1   -1-1          6-
IFONTF          4-1  254-1    4-1 50-1   -1   -1-1          7-
LABEL          52-1  294-1   52-1 20-1   -1   -1-1          8-
      1  1.6050000E+00  1.4490000E+00  7.0000000E-02  0.0000000E
+00          5
      0LARGE
      2  1.6470000E+00  1.1520000E+00  7.0000000E-02  0.0000000E
+00          5
      0SMALL
LANDLICP.TIC          XX    3    3   12          4
IDTIC          4-1    14-1    5-1 50-1   -1   -1-1          1-
XTIC          4-1    54-1   12 3 60-1   -1   -1-1          2-
YTIC          4-1    94-1   12 3 60-1   -1   -1-1          3-
      1  3.4009244E+05  4.1000002E+06
      2  3.4010028E+05  4.1004150E+06
      3  3.4090753E+05  4.1003998E+06
      4  3.4089972E+05  4.0999850E+06

EOI
EOS

```

APPENDIX C: SAMPLE EXPORT FILE AFTER LINE TOPOLOGY

```

EXP  0  /HOME/ME/SAMPLE.E00
ARC  2

```

```

      1          2          2          1          -1          -1          2
3.4029994E+05  4.1001998E+06  3.4009988E+05  4.1002000E+06
      2          3          3          2          -1          -1          2
3.4050000E+05  4.1001998E+06  3.4029994E+05  4.1001998E+06
      3          1          1          4          -1          -1          4
3.4009988E+05  4.1002000E+06  3.4040006E+05  4.1003995E+06
3.4090012E+05  4.1002000E+06  3.4070003E+05  4.1001995E+06
      4          4          4          3          -1          -1          2
3.4070003E+05  4.1001995E+06  3.4050000E+05  4.1001998E+06
      5          6          3          4          -1          -1          3
3.4050000E+05  4.1001998E+06  3.4059997E+05  4.1001002E+06
3.4070003E+05  4.1001995E+06
      6          7          4          5          -1          -1          3
3.4070003E+05  4.1001995E+06  3.4079997E+05  4.1000002E+06
3.4019978E+05  4.1000000E+06
      7          5          5          2          -1          -1          2
3.4019978E+05  4.1000000E+06  3.4029994E+05  4.1001998E+06
      -1          0          0          0          0          0          0

```

LAB 2

```

      1      0 3.4046650E+05 4.1002668E+06
3.4046650E+05 4.1002668E+06 3.4046650E+05 4.1002668E+06
      2      0 3.4048869E+05 4.1000852E+06
3.4048869E+05 4.1000852E+06 3.4048869E+05 4.1000852E+06
     -1      0 0.0000000E+00 0.0000000E+00

```

TOL 2

```

      1      1 8.1813842E-01
      2      2 0.0000000E+00
      3      2 0.0000000E+00
      4      1 0.0000000E+00
      5      2 0.0000000E+00
      6      2 8.0756250E+00
      7      2 8.0756250E-01
      8      2 8.0756250E-01
      9      2 8.0756250E-01
     10      2 8.0756250E-01
     -1      0      0      0      0      0      0

```

SIN 2

EOX

LOG 2

```

19940118 849 0 3 35export cover landli stdfigc none
~
19940118 851 0 7 145clean landli landlicl # # line
~

```

EOL

PRJ 2

Projection UTM

~

Zone 13

~

Datum NAD27

~

Zunits NO

~

Units METERS

~

Spheroid CLARKE1866

~

Xshift 0.0000000000

~

Yshift 0.0000000000

~

Parameters

~

EOP

IFO 2

LANDLICL.AAT

XX 7 7 28 7

| | | | | | | | |
|-------------|-----|-------|------|------|----|------|----|
| FNODE# | 4-1 | 14-1 | 5-1 | 50-1 | -1 | -1-1 | 1- |
| TNODE# | 4-1 | 54-1 | 5-1 | 50-1 | -1 | -1-1 | 2- |
| LPOLY# | 4-1 | 94-1 | 5-1 | 50-1 | -1 | -1-1 | 3- |
| RPOLY# | 4-1 | 134-1 | 5-1 | 50-1 | -1 | -1-1 | 4- |
| LENGTH | 4-1 | 174-1 | 12 3 | 60-1 | -1 | -1-1 | 5- |
| LANDLICL# | 4-1 | 214-1 | 5-1 | 50-1 | -1 | -1-1 | 6- |
| LANDLICL-ID | 4-1 | 254-1 | 5-1 | 50-1 | -1 | -1-1 | 7- |

| | | | |
|---|---|---|-----------------|
| 2 | 1 | 0 | 0 2.0006265E+02 |
|---|---|---|-----------------|

1

2

| | | | |
|---|---|---|-----------------|
| 3 | 2 | 0 | 0 2.0006250E+02 |
|---|---|---|-----------------|

2

3

| | | | |
|---|---|---|-----------------|
| 1 | 4 | 0 | 0 1.0989176E+03 |
|---|---|---|-----------------|

3

1

| | | | |
|---|---|---|-----------------|
| 4 | 3 | 0 | 0 2.0003140E+02 |
|---|---|---|-----------------|

4

4

| | | | |
|---|---|---|-----------------|
| 3 | 4 | 0 | 0 2.8198248E+02 |
|---|---|---|-----------------|

5

6

| | | | |
|---|---|---|-----------------|
| 4 | 5 | 0 | 0 8.2309576E+02 |
|---|---|---|-----------------|

6

7

| | | | |
|---|---|---|-----------------|
| 5 | 2 | 0 | 0 2.2345322E+02 |
|---|---|---|-----------------|

7

5

LANDLICL.ACODE

8 8 80 7

| | | | | | | | |
|-------------|------|-------|------|------|----|------|----|
| LANDLICL-ID | 4-1 | 14-1 | 8-1 | 50-1 | -1 | -1-1 | 1- |
| XLABEL | 4-1 | 54-1 | 8 2 | 60-1 | -1 | -1-1 | 2- |
| YLABEL | 4-1 | 94-1 | 8 2 | 60-1 | -1 | -1-1 | 3- |
| SIZE | 4-1 | 134-1 | 8 2 | 60-1 | -1 | -1-1 | 4- |
| ANGLE | 4-1 | 174-1 | 8 2 | 60-1 | -1 | -1-1 | 5- |
| SZLBL | 4-1 | 214-1 | 4-1 | 50-1 | -1 | -1-1 | 6- |
| IFONTF | 4-1 | 254-1 | 4-1 | 50-1 | -1 | -1-1 | 7- |
| LABEL | 52-1 | 294-1 | 52-1 | 20-1 | -1 | -1-1 | 8- |

| | | | | |
|---|---------------|---------------|---------------|------------|
| 1 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E+00 | 0.0000000E |
|---|---------------|---------------|---------------|------------|

```

+00      0
      0
      2 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E
+00      0
      0
      3 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E
+00      0
      0
      4 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E
+00      0
      0
      5 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E
+00      0
      0
      6 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E
+00      0
      0
      7 0.0000000E+00 0.0000000E+00 0.0000000E+00 0.0000000E
+00      0
      0
LANDLICL.BND
      XX      4      4      16      1
XMIN      4-1      14-1      12 3 60-1      -1      -1-1      1-
YMIN      4-1      54-1      12 3 60-1      -1      -1-1      2-
XMAX      4-1      94-1      12 3 60-1      -1      -1-1      3-
YMAX      4-1      134-1      12 3 60-1      -1      -1-1      4-
  3.4009612E+05 4.0999870E+06 3.4090369E+05 4.1004052E+06
LANDLICL.PCODE
      8      8      80      2
LANDLICL-ID      4-1      14-1      8-1 50-1      -1      -1-1      1-
XLABEL      4-1      54-1      8 2 60-1      -1      -1-1      2-
YLABEL      4-1      94-1      8 2 60-1      -1      -1-1      3-
SIZE      4-1      134-1      8 2 60-1      -1      -1-1      4-
ANGLE      4-1      174-1      8 2 60-1      -1      -1-1      5-
SZLBL      4-1      214-1      4-1 50-1      -1      -1-1      6-
IFONTF      4-1      254-1      4-1 50-1      -1      -1-1      7-
LABEL      52-1      294-1      52-1 20-1      -1      -1-1      8-
      1 1.6050000E+00 1.4490000E+00 7.0000000E-02 0.0000000E
+00      5
      0LARGE
      2 1.6470000E+00 1.1520000E+00 7.0000000E-02 0.0000000E
+00      5
      0SMALL
LANDLICL.TIC
      XX      3      3      12      4
IDTIC      4-1      14-1      5-1 50-1      -1      -1-1      1-

```

```

XTIC          4-1    54-1   12 3 60-1   -1   -1-1          2-
YTIC          4-1    94-1   12 3 60-1   -1   -1-1          3-

1 3.4009244E+05 4.1000002E+06
2 3.4010028E+05 4.1004150E+06
3 3.4090753E+05 4.1003998E+06
4 3.4089972E+05 4.0999850E+06

EOI
EOS

```

APPENDIX D: SAMPLE EXPORT FILE FOR POINT COVERAGE

```

EXP  0  /HOME/SAMPLES/WELLS.
E00
LAB   2

```

```

1          0 5.0494070E+06 4.4200809E+05
5.0494070E+06 4.4200809E+05 5.0494070E+06 4.4200809E+05
2          0 5.0537115E+06 4.3450244E+05
5.0537115E+06 4.3450244E+05 5.0537115E+06 4.3450244E+05
3          0 5.0458180E+06 4.4065578E+05
5.0458180E+06 4.4065578E+05 5.0458180E+06 4.4065578E+05
4          0 5.0413365E+06 4.3965969E+05
5.0413365E+06 4.3965969E+05 5.0413365E+06 4.3965969E+05
5          0 5.0391940E+06 4.3769166E+05
5.0391940E+06 4.3769166E+05 5.0391940E+06 4.3769166E+05
6          0 5.0471285E+06 4.3712497E+05
5.0471285E+06 4.3712497E+05 5.0471285E+06 4.3712497E+05
7          0 5.0398785E+06 4.3613550E+05
5.0398785E+06 4.3613550E+05 5.0398785E+06 4.3613550E+05
8          0 5.0398655E+06 4.3613762E+05
5.0398655E+06 4.3613762E+05 5.0398655E+06 4.3613762E+05
9          0 5.0398660E+06 4.3612434E+05
5.0398660E+06 4.3612434E+05 5.0398660E+06 4.3612434E+05
10         0 5.0385150E+06 4.3638369E+05
5.0385150E+06 4.3638369E+05 5.0385150E+06 4.3638369E+05
11         0 5.0390115E+06 4.3480209E+05
5.0390115E+06 4.3480209E+05 5.0390115E+06 4.3480209E+05
12         0 5.0441440E+06 4.3530462E+05
5.0441440E+06 4.3530462E+05 5.0441440E+06 4.3530462E+05
13         0 5.0352635E+06 4.4242825E+05
5.0352635E+06 4.4242825E+05 5.0352635E+06 4.4242825E+05
14         0 5.0293195E+06 4.3762103E+05
5.0293195E+06 4.3762103E+05 5.0293195E+06 4.3762103E+05

```

| | | | |
|---------------|---------------|---------------|---------------|
| 15 | 0 | 5.0300595E+06 | 4.3851244E+05 |
| 5.0300595E+06 | 4.3851244E+05 | 5.0300595E+06 | 4.3851244E+05 |
| 16 | 0 | 5.0370980E+06 | 4.3818822E+05 |
| 5.0370980E+06 | 4.3818822E+05 | 5.0370980E+06 | 4.3818822E+05 |
| 17 | 0 | 5.0370980E+06 | 4.3818822E+05 |
| 5.0370980E+06 | 4.3818822E+05 | 5.0370980E+06 | 4.3818822E+05 |
| 18 | 0 | 5.0366810E+06 | 4.3670638E+05 |
| 5.0366810E+06 | 4.3670638E+05 | 5.0366810E+06 | 4.3670638E+05 |
| 19 | 0 | 5.0375905E+06 | 4.3566803E+05 |
| 5.0375905E+06 | 4.3566803E+05 | 5.0375905E+06 | 4.3566803E+05 |
| 20 | 0 | 5.0370205E+06 | 4.3429197E+05 |
| 5.0370205E+06 | 4.3429197E+05 | 5.0370205E+06 | 4.3429197E+05 |
| 21 | 0 | 5.0533465E+06 | 4.3411053E+05 |
| 5.0533465E+06 | 4.3411053E+05 | 5.0533465E+06 | 4.3411053E+05 |
| 22 | 0 | 5.0514510E+06 | 4.3142975E+05 |
| 5.0514510E+06 | 4.3142975E+05 | 5.0514510E+06 | 4.3142975E+05 |
| 23 | 0 | 5.0567580E+06 | 4.3187972E+05 |
| 5.0567580E+06 | 4.3187972E+05 | 5.0567580E+06 | 4.3187972E+05 |
| 24 | 0 | 5.0567670E+06 | 4.2965009E+05 |
| 5.0567670E+06 | 4.2965009E+05 | 5.0567670E+06 | 4.2965009E+05 |
| 25 | 0 | 5.0566960E+06 | 4.2973056E+05 |
| 5.0566960E+06 | 4.2973056E+05 | 5.0566960E+06 | 4.2973056E+05 |
| 26 | 0 | 5.0549180E+06 | 4.3022238E+05 |
| 5.0549180E+06 | 4.3022238E+05 | 5.0549180E+06 | 4.3022238E+05 |
| 27 | 0 | 5.0506190E+06 | 4.3073538E+05 |
| 5.0506190E+06 | 4.3073538E+05 | 5.0506190E+06 | 4.3073538E+05 |
| 28 | 0 | 5.0489275E+06 | 4.2872991E+05 |
| 5.0489275E+06 | 4.2872991E+05 | 5.0489275E+06 | 4.2872991E+05 |
| 29 | 0 | 5.0486655E+06 | 4.2847866E+05 |
| 5.0486655E+06 | 4.2847866E+05 | 5.0486655E+06 | 4.2847866E+05 |
| 30 | 0 | 5.0517210E+06 | 4.2850744E+05 |
| 5.0517210E+06 | 4.2850744E+05 | 5.0517210E+06 | 4.2850744E+05 |
| 31 | 0 | 5.0535690E+06 | 4.2891612E+05 |
| 5.0535690E+06 | 4.2891612E+05 | 5.0535690E+06 | 4.2891612E+05 |
| 32 | 0 | 5.0536800E+06 | 4.2893353E+05 |
| 5.0536800E+06 | 4.2893353E+05 | 5.0536800E+06 | 4.2893353E+05 |
| 33 | 0 | 5.0536210E+06 | 4.2787484E+05 |
| 5.0536210E+06 | 4.2787484E+05 | 5.0536210E+06 | 4.2787484E+05 |
| 34 | 0 | 5.0548110E+06 | 4.2931866E+05 |
| 5.0548110E+06 | 4.2931866E+05 | 5.0548110E+06 | 4.2931866E+05 |
| 35 | 0 | 5.0548110E+06 | 4.2931866E+05 |
| 5.0548110E+06 | 4.2931866E+05 | 5.0548110E+06 | 4.2931866E+05 |
| 36 | 0 | 5.0544295E+06 | 4.2930706E+05 |

| | | | |
|---------------|---------------|---------------|---------------|
| 5.0544295E+06 | 4.2930706E+05 | 5.0544295E+06 | 4.2930706E+05 |
| 37 | 0 | 5.0542620E+06 | 4.2857597E+05 |
| 5.0542620E+06 | 4.2857597E+05 | 5.0542620E+06 | 4.2857597E+05 |
| 38 | 0 | 5.0555765E+06 | 4.2804956E+05 |
| 5.0555765E+06 | 4.2804956E+05 | 5.0555765E+06 | 4.2804956E+05 |
| 39 | 0 | 5.0555445E+06 | 4.2845644E+05 |
| 5.0555445E+06 | 4.2845644E+05 | 5.0555445E+06 | 4.2845644E+05 |
| 40 | 0 | 5.0556435E+06 | 4.2720366E+05 |
| 5.0556435E+06 | 4.2720366E+05 | 5.0556435E+06 | 4.2720366E+05 |
| 41 | 0 | 5.0559150E+06 | 4.2723225E+05 |
| 5.0559150E+06 | 4.2723225E+05 | 5.0559150E+06 | 4.2723225E+05 |
| 42 | 0 | 5.0543645E+06 | 4.2764378E+05 |
| 5.0543645E+06 | 4.2764378E+05 | 5.0543645E+06 | 4.2764378E+05 |
| 43 | 0 | 5.0542240E+06 | 4.2646362E+05 |
| 5.0542240E+06 | 4.2646362E+05 | 5.0542240E+06 | 4.2646362E+05 |
| 44 | 0 | 5.0530570E+06 | 4.2726859E+05 |
| 5.0530570E+06 | 4.2726859E+05 | 5.0530570E+06 | 4.2726859E+05 |
| 45 | 0 | 5.0530570E+06 | 4.2726859E+05 |
| 5.0530570E+06 | 4.2726859E+05 | 5.0530570E+06 | 4.2726859E+05 |
| 46 | 0 | 5.0537235E+06 | 4.2626819E+05 |
| 5.0537235E+06 | 4.2626819E+05 | 5.0537235E+06 | 4.2626819E+05 |
| 47 | 0 | 5.0508765E+06 | 4.2666153E+05 |
| 5.0508765E+06 | 4.2666153E+05 | 5.0508765E+06 | 4.2666153E+05 |
| 48 | 0 | 5.0500095E+06 | 4.2681334E+05 |
| 5.0500095E+06 | 4.2681334E+05 | 5.0500095E+06 | 4.2681334E+05 |
| 49 | 0 | 5.0497670E+06 | 4.2739416E+05 |
| 5.0497670E+06 | 4.2739416E+05 | 5.0497670E+06 | 4.2739416E+05 |
| 50 | 0 | 5.0501600E+06 | 4.2676775E+05 |
| 5.0501600E+06 | 4.2676775E+05 | 5.0501600E+06 | 4.2676775E+05 |
| 51 | 0 | 5.0490515E+06 | 4.2763362E+05 |
| 5.0490515E+06 | 4.2763362E+05 | 5.0490515E+06 | 4.2763362E+05 |
| 52 | 0 | 5.0485480E+06 | 4.2558822E+05 |
| 5.0485480E+06 | 4.2558822E+05 | 5.0485480E+06 | 4.2558822E+05 |
| 53 | 0 | 5.0487290E+06 | 4.2603975E+05 |
| 5.0487290E+06 | 4.2603975E+05 | 5.0487290E+06 | 4.2603975E+05 |
| 54 | 0 | 5.0497000E+06 | 4.2478025E+05 |
| 5.0497000E+06 | 4.2478025E+05 | 5.0497000E+06 | 4.2478025E+05 |
| 55 | 0 | 5.0513000E+06 | 4.2469978E+05 |
| 5.0513000E+06 | 4.2469978E+05 | 5.0513000E+06 | 4.2469978E+05 |
| 56 | 0 | 5.0510380E+06 | 4.2513288E+05 |
| 5.0510380E+06 | 4.2513288E+05 | 5.0510380E+06 | 4.2513288E+05 |
| 57 | 0 | 5.0397800E+06 | 4.3356584E+05 |
| 5.0397800E+06 | 4.3356584E+05 | 5.0397800E+06 | 4.3356584E+05 |

| | | | |
|---------------|---------------|---------------|---------------|
| 58 | 0 | 5.0401625E+06 | 4.3247184E+05 |
| 5.0401625E+06 | 4.3247184E+05 | 5.0401625E+06 | 4.3247184E+05 |
| 59 | 0 | 5.0401625E+06 | 4.3247184E+05 |
| 5.0401625E+06 | 4.3247184E+05 | 5.0401625E+06 | 4.3247184E+05 |
| 60 | 0 | 5.0401625E+06 | 4.3247184E+05 |
| 5.0401625E+06 | 4.3247184E+05 | 5.0401625E+06 | 4.3247184E+05 |
| 61 | 0 | 5.0401695E+06 | 4.3127716E+05 |
| 5.0401695E+06 | 4.3127716E+05 | 5.0401695E+06 | 4.3127716E+05 |
| 62 | 0 | 5.0408640E+06 | 4.3217603E+05 |
| 5.0408640E+06 | 4.3217603E+05 | 5.0408640E+06 | 4.3217603E+05 |
| 63 | 0 | 5.0445585E+06 | 4.3188038E+05 |
| 5.0445585E+06 | 4.3188038E+05 | 5.0445585E+06 | 4.3188038E+05 |
| 64 | 0 | 5.0451130E+06 | 4.3050697E+05 |
| 5.0451130E+06 | 4.3050697E+05 | 5.0451130E+06 | 4.3050697E+05 |
| 65 | 0 | 5.0425620E+06 | 4.3073538E+05 |
| 5.0425620E+06 | 4.3073538E+05 | 5.0425620E+06 | 4.3073538E+05 |
| 66 | 0 | 5.0405910E+06 | 4.3007469E+05 |
| 5.0405910E+06 | 4.3007469E+05 | 5.0405910E+06 | 4.3007469E+05 |
| 67 | 0 | 5.0442520E+06 | 4.2632441E+05 |
| 5.0442520E+06 | 4.2632441E+05 | 5.0442520E+06 | 4.2632441E+05 |
| 68 | 0 | 5.0442520E+06 | 4.2632441E+05 |
| 5.0442520E+06 | 4.2632441E+05 | 5.0442520E+06 | 4.2632441E+05 |
| 69 | 0 | 5.0442280E+06 | 4.2637753E+05 |
| 5.0442280E+06 | 4.2637753E+05 | 5.0442280E+06 | 4.2637753E+05 |
| 70 | 0 | 5.0438295E+06 | 4.2678347E+05 |
| 5.0438295E+06 | 4.2678347E+05 | 5.0438295E+06 | 4.2678347E+05 |
| 71 | 0 | 5.0406350E+06 | 4.2518522E+05 |
| 5.0406350E+06 | 4.2518522E+05 | 5.0406350E+06 | 4.2518522E+05 |
| 72 | 0 | 5.0284905E+06 | 4.3221456E+05 |
| 5.0284905E+06 | 4.3221456E+05 | 5.0284905E+06 | 4.3221456E+05 |
| 73 | 0 | 5.0306535E+06 | 4.2976247E+05 |
| 5.0306535E+06 | 4.2976247E+05 | 5.0306535E+06 | 4.2976247E+05 |
| 74 | 0 | 5.0292090E+06 | 4.3021500E+05 |
| 5.0292090E+06 | 4.3021500E+05 | 5.0292090E+06 | 4.3021500E+05 |
| 75 | 0 | 5.0304375E+06 | 4.2653141E+05 |
| 5.0304375E+06 | 4.2653141E+05 | 5.0304375E+06 | 4.2653141E+05 |
| 76 | 0 | 5.0296615E+06 | 4.2622000E+05 |
| 5.0296615E+06 | 4.2622000E+05 | 5.0296615E+06 | 4.2622000E+05 |
| 77 | 0 | 5.0293845E+06 | 4.2551788E+05 |
| 5.0293845E+06 | 4.2551788E+05 | 5.0293845E+06 | 4.2551788E+05 |
| 78 | 0 | 5.0285980E+06 | 4.2498803E+05 |
| 5.0285980E+06 | 4.2498803E+05 | 5.0285980E+06 | 4.2498803E+05 |
| 79 | 0 | 5.0304695E+06 | 4.2467572E+05 |

```

5.0304695E+06 4.2467572E+05 5.0304695E+06 4.2467572E+05
      80          0 5.0314780E+06 4.2545294E+05
5.0314780E+06 4.2545294E+05 5.0314780E+06 4.2545294E+05
      -1          0 0.0000000E+00 0.0000000E+00

```

TOL 2

```

      1          2 2.8276500E+00
      2          2 0.0000000E+00
      3          2 0.0000000E+00
      4          2 0.0000000E+00
      5          2 0.0000000E+00
      6          2 2.8276500E+02
      7          2 2.8276500E+01
      8          2 2.8276500E+01
      9          2 2.8276500E+01
     10          2 2.8276500E+01
     -1          0          0          0          0          0          0

```

SIN 2

EOX

IFO 2

WELLS.BND

XX 4 4 16 1

```

XMIN          4-1    14-1    12 3 60-1    -1    -1-1          1-
YMIN          4-1    54-1    12 3 60-1    -1    -1-1          2-
XMAX          4-1    94-1    12 3 60-1    -1    -1-1          3-
YMAX          4-1   134-1    12 3 60-1    -1    -1-1          4-

```

```

5.0284905E+06 4.2467572E+05 5.0567670E+06 4.4242825E+05

```

WELLS.PAT

XX 5 5 46 80

```

AREA          4-1    14-1    12 3 60-1    -1    -1-1          1-
PERIMETER     4-1    54-1    12 3 60-1    -1    -1-1          2-
WELLS#        4-1    94-1     5-1 50-1    -1    -1-1          3-
WELLS-ID      4-1   134-1     5-1 50-1    -1    -1-1          4-
DATA          30-1   174-1   30-1 20-1    -1    -1-1          5-

```

```

0.0000000E+00 0.0000000E+00          1          105103084340000
0.0000000E+00 0.0000000E+00          2          205103052120000
0.0000000E+00 0.0000000E+00          3          305103083160000
0.0000000E+00 0.0000000E+00          4          405103085410000
0.0000000E+00 0.0000000E+00          5          505103086760000
0.0000000E+00 0.0000000E+00          6          605103052290000
0.0000000E+00 0.0000000E+00          7          705103089060000
0.0000000E+00 0.0000000E+00          8          805103089070000
0.0000000E+00 0.0000000E+00          9          905103089070001
0.0000000E+00 0.0000000E+00         10         1005103080820000
0.0000000E+00 0.0000000E+00         11         1105103083850000
0.0000000E+00 0.0000000E+00         12         1205103072380000

```

| | | | |
|---------------|---------------|----|------------------|
| 0.0000000E+00 | 0.0000000E+00 | 13 | 1305103087110000 |
| 0.0000000E+00 | 0.0000000E+00 | 14 | 1405103088380000 |
| 0.0000000E+00 | 0.0000000E+00 | 15 | 1505103084460000 |
| 0.0000000E+00 | 0.0000000E+00 | 16 | 1605103092180000 |
| 0.0000000E+00 | 0.0000000E+00 | 17 | 1705103092180001 |
| 0.0000000E+00 | 0.0000000E+00 | 18 | 1805103080830000 |
| 0.0000000E+00 | 0.0000000E+00 | 19 | 1905103081830000 |
| 0.0000000E+00 | 0.0000000E+00 | 20 | 2005103084410000 |
| 0.0000000E+00 | 0.0000000E+00 | 21 | 2105103070400000 |
| 0.0000000E+00 | 0.0000000E+00 | 22 | 2205103051910000 |
| 0.0000000E+00 | 0.0000000E+00 | 23 | 2305103076160000 |
| 0.0000000E+00 | 0.0000000E+00 | 24 | 2405103051610000 |
| 0.0000000E+00 | 0.0000000E+00 | 25 | 2505103086310000 |
| 0.0000000E+00 | 0.0000000E+00 | 26 | 2605103077600000 |
| 0.0000000E+00 | 0.0000000E+00 | 27 | 2705103051780000 |
| 0.0000000E+00 | 0.0000000E+00 | 28 | 2805103051500000 |
| 0.0000000E+00 | 0.0000000E+00 | 29 | 2905103077610000 |
| 0.0000000E+00 | 0.0000000E+00 | 30 | 3005103051460000 |
| 0.0000000E+00 | 0.0000000E+00 | 31 | 3105103070440000 |
| 0.0000000E+00 | 0.0000000E+00 | 32 | 3205103076590000 |
| 0.0000000E+00 | 0.0000000E+00 | 33 | 3305103090240000 |
| 0.0000000E+00 | 0.0000000E+00 | 34 | 3405103051560000 |
| 0.0000000E+00 | 0.0000000E+00 | 35 | 3505103051560001 |
| 0.0000000E+00 | 0.0000000E+00 | 36 | 3605103073550000 |
| 0.0000000E+00 | 0.0000000E+00 | 37 | 3705103077620000 |
| 0.0000000E+00 | 0.0000000E+00 | 38 | 3805103051380000 |
| 0.0000000E+00 | 0.0000000E+00 | 39 | 3905103051430000 |
| 0.0000000E+00 | 0.0000000E+00 | 40 | 4005103077540000 |
| 0.0000000E+00 | 0.0000000E+00 | 41 | 4105103087240000 |
| 0.0000000E+00 | 0.0000000E+00 | 42 | 4205103075630000 |
| 0.0000000E+00 | 0.0000000E+00 | 43 | 4305103076620000 |
| 0.0000000E+00 | 0.0000000E+00 | 44 | 4405103059900000 |
| 0.0000000E+00 | 0.0000000E+00 | 45 | 4505103059900001 |
| 0.0000000E+00 | 0.0000000E+00 | 46 | 4605103091290000 |
| 0.0000000E+00 | 0.0000000E+00 | 47 | 4705103073990000 |
| 0.0000000E+00 | 0.0000000E+00 | 48 | 4805103051220000 |
| 0.0000000E+00 | 0.0000000E+00 | 49 | 4905103080970000 |
| 0.0000000E+00 | 0.0000000E+00 | 50 | 5005103092520000 |
| 0.0000000E+00 | 0.0000000E+00 | 51 | 5105103051350000 |
| 0.0000000E+00 | 0.0000000E+00 | 52 | 5205103075060000 |
| 0.0000000E+00 | 0.0000000E+00 | 53 | 5305103092920000 |
| 0.0000000E+00 | 0.0000000E+00 | 54 | 5405103059910000 |
| 0.0000000E+00 | 0.0000000E+00 | 55 | 5505103050940000 |

| | | | |
|---------------|---------------|----|------------------|
| 0.0000000E+00 | 0.0000000E+00 | 56 | 5605103092090000 |
| 0.0000000E+00 | 0.0000000E+00 | 57 | 5705103082160000 |
| 0.0000000E+00 | 0.0000000E+00 | 58 | 5805103075270000 |
| 0.0000000E+00 | 0.0000000E+00 | 59 | 5905103075270001 |
| 0.0000000E+00 | 0.0000000E+00 | 60 | 6005103075270002 |
| 0.0000000E+00 | 0.0000000E+00 | 61 | 6105103076110000 |
| 0.0000000E+00 | 0.0000000E+00 | 62 | 6205103052000000 |
| 0.0000000E+00 | 0.0000000E+00 | 63 | 6305103084100000 |
| 0.0000000E+00 | 0.0000000E+00 | 64 | 6405103051740000 |
| 0.0000000E+00 | 0.0000000E+00 | 65 | 6505103088690000 |
| 0.0000000E+00 | 0.0000000E+00 | 66 | 6605103074560000 |
| 0.0000000E+00 | 0.0000000E+00 | 67 | 6705103051150000 |
| 0.0000000E+00 | 0.0000000E+00 | 68 | 6805103051150001 |
| 0.0000000E+00 | 0.0000000E+00 | 69 | 6905103051160000 |
| 0.0000000E+00 | 0.0000000E+00 | 70 | 7005103072340000 |
| 0.0000000E+00 | 0.0000000E+00 | 71 | 7105103072600000 |
| 0.0000000E+00 | 0.0000000E+00 | 72 | 7205103081900000 |
| 0.0000000E+00 | 0.0000000E+00 | 73 | 7305103078970000 |
| 0.0000000E+00 | 0.0000000E+00 | 74 | 7405103087180000 |
| 0.0000000E+00 | 0.0000000E+00 | 75 | 7505103080730000 |
| 0.0000000E+00 | 0.0000000E+00 | 76 | 7605103089900000 |
| 0.0000000E+00 | 0.0000000E+00 | 77 | 7705103078320000 |
| 0.0000000E+00 | 0.0000000E+00 | 78 | 7805103088630000 |
| 0.0000000E+00 | 0.0000000E+00 | 79 | 7905103080740000 |
| 0.0000000E+00 | 0.0000000E+00 | 80 | 8005103084150000 |

| | | | | | | | | |
|-----------|-----|---------------|---------------|------|----|------|---|----|
| WELLS.TIC | | | XX | 3 | 3 | 12 | 4 | |
| IDTIC | 4-1 | 14-1 | 5-1 | 50-1 | -1 | -1-1 | | 1- |
| XTIC | 4-1 | 54-1 | 12 3 | 60-1 | -1 | -1-1 | | 2- |
| YTIC | 4-1 | 94-1 | 12 3 | 60-1 | -1 | -1-1 | | 3- |
| | 1 | 5.0567670E+06 | 4.2467572E+05 | | | | | |
| | 4 | 5.0567670E+06 | 4.4242825E+05 | | | | | |
| | 2 | 5.0284905E+06 | 4.2467572E+05 | | | | | |
| | 3 | 5.0284905E+06 | 4.4242825E+05 | | | | | |

EOI

EOS

APPENDIX E: SAMPLE EXPORT FILE FOR SINGLE-PRECISION COVERAGE

This is the single-precision version of the same coverage exported in Appendix F.

EXP 0 /HOME/SAMPLES/SINGLE.

E00

ARC 2

| | | | | | | |
|---------------|---------------|---------------|---------------|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| 3.4020000E+05 | 4.1000000E+06 | 3.4030000E+05 | 4.1002000E+06 | | | |
| 3.4050000E+05 | 4.1002000E+06 | 3.4060000E+05 | 4.1001000E+06 | | | |
| 3.4070000E+05 | 4.1002000E+06 | 3.4080000E+05 | 4.1000000E+06 | | | |
| 3.4020000E+05 | 4.1000000E+06 | | | | | |
| 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 3.4010000E+05 | 4.1002000E+06 | 3.4040000E+05 | 4.1004000E+06 | | | |
| 3.4090000E+05 | 4.1002000E+06 | 3.4010000E+05 | 4.1002000E+06 | | | |
| -1 | 0 | 0 | 0 | 0 | 0 | 0 |

LAB 2

| | | | | | | |
|---------------|---------------|---------------|---------------|--|--|--|
| 1 | 2 | 3.4050000E+05 | 4.1000622E+06 | | | |
| 3.4050000E+05 | 4.1000622E+06 | 3.4050000E+05 | 4.1000622E+06 | | | |
| 2 | 3 | 3.4046881E+05 | 4.1002622E+06 | | | |
| 3.4046881E+05 | 4.1002622E+06 | 3.4046881E+05 | 4.1002622E+06 | | | |
| -1 | 0 | 0.0000000E+00 | 0.0000000E+00 | | | |

TOL 2

| | | | | | | |
|----|---|---------------|---|---|---|---|
| 1 | 2 | 8.0000000E-02 | | | | |
| 2 | 2 | 0.0000000E+00 | | | | |
| 3 | 2 | 0.0000000E+00 | | | | |
| 4 | 2 | 0.0000000E+00 | | | | |
| 5 | 2 | 0.0000000E+00 | | | | |
| 6 | 2 | 8.0000000E+00 | | | | |
| 7 | 2 | 8.0000000E-01 | | | | |
| 8 | 2 | 8.0000000E-01 | | | | |
| 9 | 2 | 8.0000000E-01 | | | | |
| 10 | 2 | 8.0000000E-01 | | | | |
| -1 | 0 | 0 | 0 | 0 | 0 | 0 |

SIN 2

EOX

LOG 2

```

199308131302  0      3      33export cover stdfig11c stdfig11cp none
~
199308131305  0      0      8rename stdfig11c stdfig11cp
~

```

EOL

IFO 2

STDFIG11CP.BND

| | | | | | | |
|------|-----|-------|------|------|----|------|
| | XX | 4 | 4 | 16 | 1 | |
| XMIN | 4-1 | 14-1 | 12 3 | 60-1 | -1 | -1-1 |
| YMIN | 4-1 | 54-1 | 12 3 | 60-1 | -1 | -1-1 |
| XMAX | 4-1 | 94-1 | 12 3 | 60-1 | -1 | -1-1 |
| YMAX | 4-1 | 134-1 | 12 3 | 60-1 | -1 | -1-1 |

```

3.4010000E+05 4.1000000E+06 3.4090000E+05 4.1004000E+06
STDFIG11CP.PAT          XX    5    5   46          3
AREA                   4-1    14-1   12 3 60-1   -1   -1-1          1-
PERIMETER              4-1    54-1   12 3 60-1   -1   -1-1          2-
STDFIG11CP#           4-1    94-1    5-1 50-1   -1   -1-1          3-
STDFIG11CP-ID         4-1   134-1    5-1 50-1   -1   -1-1          4-
DATA                  30-1   174-1   30-1 20-1   -1   -1-1          5-
-1.7000000E+05 0.0000000E+00          1          0
 9.0000000E+04 1.5300563E+03          2          1SMALL
 8.0000000E+04 1.6990717E+03          3          2LARGE
STDFIG11CP.TIC          XX    3    3   12          4
IDTIC                  4-1    14-1    5-1 50-1   -1   -1-1          1-
XTIC                   4-1    54-1   12 3 60-1   -1   -1-1          2-
YTIC                   4-1    94-1   12 3 60-1   -1   -1-1          3-
      1 3.4090000E+05 4.1000000E+06
      4 3.4090000E+05 4.1004000E+06
      2 3.4010000E+05 4.1000000E+06
      3 3.4010000E+05 4.1004000E+06
EOI
EOS

```

APPENDIX F: SAMPLE EXPORT FILE FOR DOUBLE-PRECISION COVERAGE

This is the double-precision version of the same coverage exported in Appendix E.

```

EXP    0  /HOME/SAMPLES/DOUBLE.
E00
ARC    3
      1          0          0          0          0          0          7
3.402000000000000E+05 4.100000000000000E+06
3.403000000000000E+05 4.100200000000000E+06
3.405000000000000E+05 4.100200000000000E+06
3.406000000000000E+05 4.100100000000000E+06
3.407000000000000E+05 4.100200000000000E+06
3.408000000000000E+05 4.100000000000000E+06
3.402000000000000E+05 4.100000000000000E+06
      2          0          0          0          0          0          4
3.401000000000000E+05 4.100200000000000E+06
3.404000000000000E+05 4.100400000000000E+06
3.409000000000000E+05 4.100200000000000E+06
3.401000000000000E+05 4.100200000000000E+06

```

| | | | | | | |
|----|---|---|---|---|---|---|
| -1 | 0 | 0 | 0 | 0 | 0 | 0 |
|----|---|---|---|---|---|---|

LAB 3

| | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3.405000000000000E+05 | 4.100062250000000E+06 |
| 3.405000000000000E+05 | 4.100062250000000E+06 | | |
| 3.405000000000000E+05 | 4.100062250000000E+06 | | |
| 2 | 3 | 3.404688125000000E+05 | 4.100262250000000E+06 |
| 3.404688125000000E+05 | 4.100262250000000E+06 | | |
| 3.404688125000000E+05 | 4.100262250000000E+06 | | |
| -1 | 0 | 0.000000000000000E+00 | 0.000000000000000E+00 |

TOL 3

| | | |
|----|---|-----------------------|
| 1 | 2 | 8.000000000000000E-02 |
| 2 | 2 | 0.000000000000000E+00 |
| 3 | 2 | 0.000000000000000E+00 |
| 4 | 2 | 0.000000000000000E+00 |
| 5 | 2 | 0.000000000000000E+00 |
| 6 | 2 | 8.000000000000000E+00 |
| 7 | 2 | 8.000000000000000E-01 |
| 8 | 2 | 8.000000000000000E-01 |
| 9 | 2 | 8.000000000000000E-01 |
| 10 | 2 | 8.000000000000000E-01 |
| -1 | 0 | 0 |

SIN 3

EOX

LOG 3

```

199308131302    0      3      33export cover stdfig11c stdfig11cp none
~
199308131305    0      0      8rename stdfig11c stdfig11cp
~
199308251333    0      1      78copy stdfig11cp stdfig11cpx double
~

```

EOL

IFO 3

STDFIG11CPX.BND

| | | | | | | |
|------|-----|-------|------|------|----|----|
| | XX | 4 | 4 | 32 | 1 | |
| XMIN | 8-1 | 14-1 | 18 5 | 60-1 | -1 | 1- |
| YMIN | 8-1 | 94-1 | 18 5 | 60-1 | -1 | 2- |
| XMAX | 8-1 | 174-1 | 18 5 | 60-1 | -1 | 3- |
| YMAX | 8-1 | 254-1 | 18 5 | 60-1 | -1 | 4- |

```

3.4010000000000000E+05 4.1000000000000000E+06 3.4090000000000000E
+05

```

4.10040

000000000000000E+06

STDFIG11CPX.PAT

| | | | | | | |
|------|-----|------|------|------|----|----|
| | XX | 5 | 5 | 54 | 3 | |
| AREA | 8-1 | 14-1 | 18 5 | 60-1 | -1 | 1- |

| | | | | | | | | |
|---------------------------|--------------------------|--------------------------|------|------|----|------|---|----|
| PERIMETER | 8-1 | 94-1 | 18 5 | 60-1 | -1 | -1-1 | | 2- |
| STDFIG11CPX# | 4-1 | 174-1 | 5-1 | 50-1 | -1 | -1-1 | | 3- |
| STDFIG11CPX-ID | 4-1 | 214-1 | 5-1 | 50-1 | -1 | -1-1 | | 4- |
| DATA | 30-1 | 254-1 | 30-1 | 20-1 | -1 | -1-1 | | 5- |
| -1.700000000000000000E+05 | 0.000000000000000000E+00 | | | | | | 1 | 0 |
| 9.000000000000000000E+04 | 1.53005627441406250E+03 | | | | | | 2 | |
| 1SMALL | | | | | | | | |
| 8.000000000000000000E+04 | 1.69907165527343750E+03 | | | | | | 3 | |
| 2LARGE | | | | | | | | |
| STDFIG11CPX.TIC | | | XX | 3 | 3 | 20 | 4 | |
| IDTIC | 4-1 | 14-1 | 5-1 | 50-1 | -1 | -1-1 | | 1- |
| XTIC | 8-1 | 54-1 | 18 5 | 60-1 | -1 | -1-1 | | 2- |
| YTIC | 8-1 | 134-1 | 18 5 | 60-1 | -1 | -1-1 | | 3- |
| 1 | 3.409000000000000000E+05 | 4.100000000000000000E+06 | | | | | | |
| 4 | 3.409000000000000000E+05 | 4.100400000000000000E+06 | | | | | | |
| 2 | 3.401000000000000000E+05 | 4.100000000000000000E+06 | | | | | | |
| 3 | 3.401000000000000000E+05 | 4.100400000000000000E+06 | | | | | | |
| EOI | | | | | | | | |
| EOS | | | | | | | | |